

ANSWERS: Crystal ball questions on Primary, secondary and tertiary molecules

All of the following questions have not (as yet!) appeared in the NCEA Level 2 Exams

1)

primary	secondary
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2) 2-methylbutan-2-ol

The carbon atom that is bonded to the OH is bonded to 3 other carbon atoms, therefore a tertiary alcohol

3) 5-methylhexan-3-ol

Secondary alcohol because the carbon atom bonded to the OH is directly bonded to 2 other carbon atoms, therefore a secondary alcohol

4)

$\begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & & & \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{O} & -\text{H} \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & & & \end{array}$	$\begin{array}{ccccccc} & & \text{H} & & & & \\ & & & & & & \\ & \text{H} & \text{O} & \text{H} & & & \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{H} \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & & & \end{array}$
propan-1-ol	propan-2-ol
primary	secondary

5) tertiary, primary, secondary

6) 1,1,2-tribromoethane. This is a primary haloalkane as the carbon atom bonded to the Br atom (any one of the 3 Br atoms) is bonded to 1 other carbon atom